

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Attorney Docket No. 13315US02

In the Application of: MacInnis)
)
U.S. Serial No.: 10/034,414)
)
Filed: December 27, 2001)
)
Examiner: Phillippe, Gims)
)
Group Art Unit: 2621)
)
Confirmation: 1160)
)

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Sir:

This is an appeal from the Office Action made Final mailed March 21, 2007. A Notice of Appeal was filed with the United States Patent and Trademark Office on June 21, 2007. Additionally, Appellant hereby withdraws the Pre-Brief Conference Request filed on November 21, 2007.

TABLE OF CONTENTS

I.	REAL PARTY IN INTEREST	4
II.	RELATED APPEALS AND INTERFERENCES.....	4
III.	STATUS OF THE CLAIMS.....	4
IV.	STATUS OF AMENDMENTS	4
V.	SUMMARY OF CLAIMED SUBJECT MATTER.....	5
VI.	GROUND OF REJECTION TO BE REVIEWED ON APPEAL.....	8
VII.	ARGUMENT – CLAIM 1 IS NOT ANTICIPATED BY MAIR.....	9
	A. CLAIM 1 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)	9
	B. CLAIM 1 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)	10
	C. EVEN IF MAIR IS AFFORDED THE FILING DATE OF THE PROVISIONAL APPLICATION, THE REJECTION SHOULD BE REVERSED BECAUSE MAIR DOES NOT DISCLOSE “ENCODING SAID FIRST DATA BASED ON A STATE OF AT LEAST ONE BIT OF SAID SECOND DATA”	13
VIII.	ARGUMENT – CLAIM 12 IS NOT ANTICIPATED BY MAIR.....	14
	A. CLAIM 12 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)	15
	B. CLAIM 12 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)	15
IX.	ARGUMENT – CLAIM 13 IS NOT ANTICIPATED BY MAIR.....	19
	A. CLAIM 13 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)	19
	B. CLAIM 13 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)	20
X.	ARGUMENT – CLAIM 18 IS NOT ANTICIPATED BY MAIR.....	23
	A. CLAIM 18 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)	23

B.	CLAIM 18 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)	24
C.	EVEN IF MAIR IS AFFORDED THE FILING DATE OF THE PROVISIONAL APPLICATION, THE REJECTION SHOULD BE REVERSED BECAUSE MAIR DOES NOT DISCLOSE “ADAPTED TO ENCODE SAID FIRST DATA BASED ON A STATE OF AT LEAST ONE BIT OF SAID SECOND DATA”.....	27
XI.	CLAIM 19 IS NOT OBVIOUS FROM MAIR	29
XII.	CONCLUSION	32

I. REAL PARTY IN INTEREST

Broadcom Corporation, a corporation organized under the laws of the state of California and having a place of business at 16215 Alton Parkway, Irvine California 92618-3616, has acquired the entire right, title, and interest in and to the invention, the application, and any and all patents to be obtained therefore, as set forth in the Assignment filed with the present application and recorded on 2/20/2002 at Reel/Frame 012614/0045.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences with this case.

III. STATUS OF THE CLAIMS

Claims 1-18 were rejected under 35 U.S.C. § 102(b) as being anticipated from U.S. Patent Publication No. 2002/0186322 ("Mair").

Claims 19-21 were rejected under 35 U.S.C. § 103(a) as being obvious from Mair.

IV. STATUS OF AMENDMENTS

There are no amendments pending in the present application.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Features of the present invention may be found in a video encoding scheme supporting the transport of audio and auxiliary information.

Claim 1 is directed to a method of transmitting auxiliary data in video encoding comprising receiving first and second data; encoding said first data based on a state of at least one bit of said second data; and packaging said encoded first data and said second data into a single word; and communicating said single word.

Claim 1 is described in the specification, for example, a method of transmitting auxiliary data in in video encoding comprising receiving first and second data is described at least in Paragraph 22 (“In one embodiment, system 100 includes the enhanced encoder 111 which receives a first and second data input in an un-encoded form”). The specification describes encoding said first data based on a state of at least one bit of said second data, at least in paragraph 27 (“If the second data bit(s) and the expected decoder instruction bit(s) do not match, the enhanced encoder 111 anticipated, based on the ‘J’ second data bits and the ‘K’ decoder instruction bits, the result of the decoding process to be applied by the unenhanced decoder 107 on the ‘N’ first data bits, and modifies at least one of the ‘N’ first data bits to counteract the result.”). The specification describes packaging said encoded first data and said second data into a single word, at least at Paragraph 22 (“Hereafter, the ‘N’ first data bits (with or without decoder compensation), ‘J’ second data bits and ‘K’ decoder

instruction bits are packaged into a word (N+J+K) for delivery.”). The specification describes communication said single word, at least at paragraph 22 (Typically the word is delivered or transmitted across a communication link such as a DVI interface for example to the enhanced decoder 105 or the un-enhanced decoder 107”).

Claim 12 is directed to a method for balancing a code word in a video encoder comprising receiving data; determining a particular state for said data; and encoding said data based on the particular state for the data.

Claim 12 is described in the specification, for example, a method of balancing a code word in a video encoder comprising receiving data is described in the specification at least at paragraph 31. The specification describes determining a particular state for said data at least at paragraphs 31-32. The specification describes encoding said data based on the particular state for the data, at least at paragraphs 32.

Claim 13 is directed to a method of balancing a code word in video encoder comprising receiving data; determining a particular state for said data; selecting a logic operation that will result in a state closest to said particular state; and performing said selected logic operation on at least a portion of said data.

Claim 13 is described in the specification, for example, a method of balancing a code word in video encoder comprising receiving data is described at least at paragraph 31. The specification describes determining a particular state for said data at least at paragraphs 31,32. The specification describes selecting a

logic operation that will result in a state closest to said particular state at least at paragraph 32. The specification describes performing said selected logic operation on at least a portion of said data at least at paragraph 32.

Claim 18 is directed to a system for transmitting auxiliary data in video encoding. The system comprises a receiver, an encoder, a packaging device and a communication device. The receiver is adapted to receive first and second data. The encoder is adapted to encode said first data based on at least one bit of said second data. The packaging device is adapted to package said encoded first and second data into a single word. The communication device is adapted to communicate said single word.

Claim 18 is described in the specification, for example, a system for transmitting auxiliary data in video encoding comprising comprises a receiver, an encoder, a packaging device and a communication device, is described at least at Figure 1. The receiver is adapted to receive first and second data. Figure 1, 1st Data Input, 2nd Data Input. The encoder is adapted to encode said first data based on at least one bit of said second data. Figure 1, 111, paragraph 27. The packaging device is adapted to package said encoded first and second data into a single word. Figure 1, Enhanced Data Word. The communication device is adapted to communicate said single word. Paragraph 22.

Claim 19 is directed to a system for transmitting auxiliary data in video encoding. The system comprises an un-enhanced encoder, an enhanced encoder; an un-enhanced decoder, and an enhanced decoder. The un-enhanced

decoder is adapted to communicate with said un-enhanced and enhanced encoders. The enhanced decoder is adapted to communicate with said un-enhanced and enhanced encoders.

Claim 19 is described in the specification for example a system for transmitting auxiliary data in video encoding comprising an un-enhanced encoder, an enhanced encoder; an un-enhanced decoder, and an enhanced decoder is described in Figure 1, (Un-Enhanced Encoder 101, Enhanced Encoder 111, Un-Enhanced Decoder 107, Enhanced Decoder 105). The un-enhanced decoder is adapted to communicate with said un-enhanced and enhanced encoders. Figure 1, Un-Enhanced Decoder 107. The enhanced decoder is adapted to communicate with said un-enhanced and enhanced encoders. Figure 1, Enhanced Decoder 105.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellant respectfully requests that the Board review the rejection of:

Claim 1 under 35 U.S.C. § 102(b)/102(e) as anticipated by Mair.

Claim 12 under 35 U.S.C. § 102(b)/102(e) as anticipated by Mair.

Claim 13 under 35 U.S.C. § 102(b)/102(e) as anticipated by Mair.

Claim 18 under 35 U.S.C. § 102(b)/102(e) as anticipated by Mair.

Claim 19 under 35 U.S.C. § 103(a) as obvious from Mair.

VII. ARGUMENT – CLAIM 1 IS NOT ANTICIPATED BY MAIR

Claims 1 stands rejected under 35 U.S.C. § 102(b) as anticipated by Mair.

Claim 1 is reproduced below:

1. A method of transmitting auxiliary data in video encoding comprising:
 - receiving first and second data;
 - encoding said first data based on a state of at least one bit of said second data; and
 - packaging said encoded first data and said second data into a single word; and
 - communicating said single word.

A. CLAIM 1 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)

Claim 1 was “rejected under 35 U.S.C. 102(b) as being anticipated by Mair. First Office Action (1OA) at 3; Final Office Action (FOA), at 3. However, it appears that Examiner meant to reject claim 1 under section (e) of 35 U.S.C. 102 because Examiner quotes this section immediately prior, 1OA, at 3, Paragraph 4; FOA, at 3, Paragraph 2.

Appellant brought the foregoing to the attention of the Examiner in the response to the first office action of December 18, 2006. Response to Office Action, Remarks. However, the Examiner did not clarify this in the Final Office Action. In fact, Examiner again quoted section (e) of 35 U.S.C. § 102, but rejected claim 1 under section (b).

To the extent that claim 1 is rejected under 35 U.S.C. § 102(b), Appellant respectfully submits that Mair was published on December 12, 2002 (Mair, Cover), after the filing date of the present application, December 27, 2001 and

after the priority date of the present application, August 17, 2001, and thus not available as prior art under 35 U.S.C. § 102(b).

B. CLAIM 1 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)

To reject claim 1, Examiner indicated that “Mair discloses the same method of transmitting auxiliary data in video encoding (See Abstract) comprising receiving first and second data (See [0042], lines 4-6), encoding the first data based on a state of at least one bit of the second data (See [0033], lines 7-19 and [0035, lines 7-16), packaging the encoded first data and the second data into a single word (See [0042]), and communicating the single word (See [0043]).” FOA at 4.

Appellant notes that the present application claims a priority date to August 17, 2001 under 35 U.S.C. § 119(e)(1). The Appellant notes that Mair was filed on October 15, 2001 and claims priority to provisional application, Serial No. 60/296,924, filed June 8, 2001 (hereinafter, “the ‘924 Application”). Reference is made to the following citation from the MPEP:

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions **if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.**

See the M.P.E.P. § 2136.03 (Emphasis Added). Appellant points out that the '924 Application does not disclose any of the FIGS. 1-5, which were disclosed in Mair. In essence, the '924 Application merely summarizes the use of the 8 bit/10 bit encoding process, which is a part of the disclosure in Mair. The Applicant respectfully submits that **the '924 Application does not properly “support the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.”**

For example, with respect to independent claim 1, the Examiner relies on [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]. See the Final Office Action at 4. As stated above, the '924 Application merely describes the use of the extra bits (Bit 8 and Bit 9) and it does not support any of the citations that the Examiner relies on (e.g., [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]), nor does it support any of the Figures 1-5 of Mair, corresponding to the above citations used in the Examiner's rejections.

For example, paragraph [0035] describes Figure 2, while [0042] and [0043] describe Figure 5. Neither Figures 2 or 5 are in the '924 application.

Examiner has indicated that:

The proposal submitted on the provisional application contains the elements to meet the 35 U.S.C. § 112 first criteria. The provisional application notes in the introduction that The DVI signal perform the encoding while two additional bits perform specific and distinct functions (See Introduction of the Provisional Application). The first and second functions of bits 8 and 9 in addition to the fact that DC balancing will be used to transport audio information are important in considering the proposal. The elements of the Abstract in the Application of Mair et al. (i.e., Publication No. 2002/0186322 A1) are proposed in the Introduction of the provisional. In addition, the Principle of Operation as well as in the section named

"proposal" were considered by the examiner. Considering the fact that the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application) it is clear to the examiner that one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant.

FOA, at 2-3 (Emphasis Added).

Examiner's use of Mair as prior art, in view of the reasoning in the Final Office Action is erroneous because Examiner does not even allege, much less establish, that the '924 properly supports the subject matter (e.g., Mair [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]) relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. The fact that "the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application)" is simply not the proper standard for determining whether the "critical reference date of" Mair "is the filing date of the provisional application".

Additionally, whether "one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant" is not the standard for a rejection under 35 U.S.C. § 102. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Therefore, since the '924 Application does not properly support the subject matter relied upon to make the rejection, the 35 U.S.C. 102(e) critical date of Mair should not be the filing date of the '924 Application, but rather the filing date of the utility application, which is October 15, 2001. Since the present application has a priority date August 17, 2001, Mair is not prior art under 35 U.S.C. 102(e).

C. EVEN IF MAIR IS AFFORDED THE FILING DATE OF THE PROVISIONAL APPLICATION, THE REJECTION SHOULD BE REVERSED BECAUSE MAIR DOES NOT DISCLOSE “ENCODING SAID FIRST DATA BASED ON A STATE OF AT LEAST ONE BIT OF SAID SECOND DATA”

Even assuming for the sake of argument that the '924 Application complies with 35 USC § 112, 1st ¶ (which the Applicant maintains that it does not), the Examiner's argument regarding the rejection of claim 1 under 35 U.S.C. § 102(e) is still deficient. For example, the Applicant submits that Mair does not disclose or suggest at least the limitation of “encoding said first data based on a state of at least one bit of said second data,” as recited in Applicant's claim 1.

In his Final Office Action, the Examiner relies for support on lines 7-19 of [0033] and lines 7-16 of [0035]. See the Final Office Action at page 4. The Applicant respectfully disagrees. Paragraphs [0033] and [0035] of Mair relate to prior art Figures 1 and 2, respectively. More specifically, paragraph [0033] and Figure 1 relate to the DVI 1.0 encoding algorithm, and paragraph [0035] and Figure 2 relate to various DVI encoding concepts. Paragraphs [0033] and [0035], as well as Figures 1 and 2 of Mair, do not disclose or suggest that encoding of

first data based on a state of at least one bit from second data, as recited in Applicant's claim 1.

With regard to Examiner's "Response to Arguments" section in the Final Office Action, it seems that the Examiner is also relying on the use of bits 8 and 9 by Mair. This argument is also deficient as it does not provide any support for what is recited in Applicant's claim 1. For example, Mair discloses that bit 8 is used to indicate a translation that the data may go through for the purpose of transition minimization. See Mair at ¶ 0019. Mair also discloses that bit 9 is used to indicate optional inversion of bits 0 through 7. See *id.* at ¶ 0020. However, neither bit 8 nor bit 9 is used by Mair for purposes of encoding any data.

Therefore, the Applicant maintains that Mair does not disclose or suggest at least the limitation of "encoding said first data based on a state of at least one bit of said second data," as recited in Applicant's claim 1.

For the foregoing reasons, Assignee respectfully requests that the Board REVERSE the rejection to claim 1 as well as the rejection to dependent claims 2-11.

VIII. ARGUMENT – CLAIM 12 IS NOT ANTICIPATED BY MAIR

Claims 12 stands rejected under 35 U.S.C. § 102(b) as anticipated by Mair.

Claim 12 is reproduced below:

A method of balancing a code word in a video encoder comprising:
receiving data;
determining a particular state for said data; and
encoding said data based on the particular state for the data.

A. CLAIM 12 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)

Claim 12 was “rejected under 35 U.S.C. 102(b) as being anticipated by Mair. First Office Action (1OA) at 3; Final Office Action (FOA), at 3. However, it appears that Examiner meant to reject claim 12 under section (e) of 35 U.S.C. 102 because Examiner quotes this section immediately prior, 1OA, at 3, Paragraph 4; FOA, at 3, Paragraph 2.

Appellant brought the foregoing to the attention of the Examiner in the response to the first office action of December 18, 2006. Response to Office Action, Remarks. However, the Examiner did not clarify this in the Final Office Action. In fact, Examiner again quoted section (e) of 35 U.S.C. § 102, but rejected claim 12 under section (b).

To the extent that claim 12 is rejected under 35 U.S.C. § 102(b), Appellant respectfully submits that Mair was published on December 12, 2002 (Mair, Cover), after the filing date of the present application, December 27, 2001 and after the priority date of the present application, August 17, 2001, and thus not available as prior art under 35 U.S.C. § 102(b).

B. CLAIM 12 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)

To reject claim 12, Examiner indicated that “Mair discloses the same method of transmitting auxiliary data in video encoding (See Abstract) comprising receiving first and second data (See [0042], lines 4-6), encoding the first data based on a state of at least one bit of the second data (See [0033], lines 7-19 and [0035, lines 7-16), packaging the encoded first data and the second data into

a single word (See [0042]), and communicating the single word (See [0043]).”
FOA at 4.

Appellant notes that the present application claims a priority date to August 17, 2001 under 35 U.S.C. § 119(e)(1). The Appellant notes that Mair was filed on October 15, 2001 and claims priority to provisional application, Serial No. 60/296,924, filed June 8, 2001 (hereinafter, “the ‘924 Application”). Reference is made to the following citation from the MPEP:

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions **if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.**

See the M.P.E.P. § 2136.03 (Emphasis Added). Appellant points out that the ‘924 Application does not disclose any of the FIGS. 1-5, which were disclosed in Mair. In essence, the ‘924 Application merely summarizes the use of the 8 bit/10 bit encoding process, which is a part of the disclosure in Mair. The Applicant respectfully submits that **the ‘924 Application does not properly “support the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.”**

For example, with respect to independent claim 12, the Examiner relies on [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]. See the Final Office Action at pages 3-4. As stated above, the ‘924 Application

merely describes the use of the extra bits (Bit 8 and Bit 9) and it does not support any of the citations that the Examiner relies on (e.g., [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]), nor does it support any of the Figures 1-5 of Mair, corresponding to the above citations used in the Examiner's rejections.

For example, paragraph [0035] describes Figure 2, while [0042] and [0043] describe Figure 5. Neither Figures 2 or 5 are in the '924 application.

Examiner has indicated that:

The proposal submitted on the provisional application contains the elements to meet the 35 U.S.C. § 112 first criteria. The provisional application notes in the introduction that The DVI signal perform the encoding while two additional bits perform specific and distinct functions (See Introduction of the Provisional Application). The first and second functions of bits 8 and 9 in addition to the fact that DC balancing will be used to transport audio information are important in considering the proposal. The elements of the Abstract in the Application of Mair et al. (i.e., Publication No. 2002/0186322 A1) are proposed in the Introduction of the provisional. In addition, the Principle of Operation as well as in the section named "proposal" were considered by the examiner. Considering the fact that the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application) it is clear to the examiner that one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant.

FOA, at 2-3 (Emphasis Added).

Examiner's use of Mair as prior art, in view of the reasoning in the Final Office Action is erroneous because Examiner does not even allege, much less establish, that the '924 properly supports the subject matter (e.g., Mair [0042],

lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]) relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. The fact that “the elements of the abstract of Mair’s Publication (2002/0186322 A1) are found in the proposal (which is the provisional application)” is simply not the proper standard for determining whether the “critical reference date of” Mair “is the filing date of the provisional application”.

Additionally, whether “one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant” is not the standard for a rejection under 35 U.S.C. § 102. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Therefore, since the ‘924 Application does not properly support the subject matter relied upon to make the rejection, the 35 U.S.C. 102(e) critical date of Mair should not be the filing date of the ‘924 Application, but rather the filing date of the utility application, which is October 15, 2001. Since the present application has a priority date August 17, 2001, Mair is not prior art under 35 U.S.C. 102(e).

For the foregoing reasons, Assignee respectfully requests that the Board REVERSE the rejection to claim 12.

IX. ARGUMENT – CLAIM 13 IS NOT ANTICIPATED BY MAIR

Claims 13 stands rejected under 35 U.S.C. § 102(b) as anticipated by Mair.

Claim 13 is reproduced below:

A method of balancing a code word in video encoder comprising:

receiving data;

determining a particular state for said data;

selecting a logic operation that will result in a state closest to said particular state; and

performing said selected logic operation on at least a portion of said data.

A. CLAIM 13 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)

Claim 13 was “rejected under 35 U.S.C. 102(b) as being anticipated by Mair. First Office Action (1OA) at 3; Final Office Action (FOA), at 3. However, it appears that Examiner meant to reject claim 12 under section (e) of 35 U.S.C. 102 because Examiner quotes this section immediately prior, 1OA, at 3, Paragraph 4; FOA, at 3, Paragraph 2.

Appellant brought the foregoing to the attention of the Examiner in the response to the first office action of December 18, 2006. Response to Office Action, Remarks. However, the Examiner did not clarify this in the Final Office Action. In fact, Examiner again quoted section (e) of 35 U.S.C. § 102, but rejected claim 13 under section (b).

To the extent that claim 13 is rejected under 35 U.S.C. § 102(b), Appellant respectfully submits that Mair was published on December 12, 2002 (Mair, Cover), after the filing date of the present application, December 27, 2001 and

after the priority date of the present application, August 17, 2001, and thus not available as prior art under 35 U.S.C. § 102(b).

B. CLAIM 13 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)

To reject claim 13, Examiner indicated that “Mair discloses the same method of transmitting auxiliary data in video encoding (See Abstract) comprising receiving first and second data (See [0042], lines 4-6), encoding the first data based on a state of at least one bit of the second data (See [0033], lines 7-19 and [0035, lines 7-16), packaging the encoded first data and the second data into a single word (See [0042]), and communicating the single word (See [0043]).” FOA at 4.

Appellant notes that the present application claims a priority date to August 17, 2001 under 35 U.S.C. § 119(e)(1). The Appellant notes that Mair was filed on October 15, 2001 and claims priority to provisional application, Serial No. 60/296,924, filed June 8, 2001 (hereinafter, “the ‘924 Application”). Reference is made to the following citation from the MPEP:

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions **if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.**

See the M.P.E.P. § 2136.03 (Emphasis Added). Appellant points out that the '924 Application does not disclose any of the FIGS. 1-5, which were disclosed in Mair. In essence, the '924 Application merely summarizes the use of the 8 bit/10 bit encoding process, which is a part of the disclosure in Mair. The Applicant respectfully submits that **the '924 Application does not properly “support the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.”**

For example, with respect to independent claim 12, the Examiner relies on [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]. See the Final Office Action at pages 3-4. As stated above, the '924 Application merely describes the use of the extra bits (Bit 8 and Bit 9) and it does not support any of the citations that the Examiner relies on (e.g., [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]), nor does it support any of the Figures 1-5 of Mair, corresponding to the above citations used in the Examiner's rejections.

For example, paragraph [0035] describes Figure 2, while [0042] and [0043] describe Figure 5. Neither Figures 2 or 5 are in the '924 application.

Examiner has indicated that:

The proposal submitted on the provisional application contains the elements to meet the 35 U.S.C. § 112 first criteria. The provisional application notes in the introduction that The DVI signal perform the encoding while two additional bits perform specific and distinct functions (See Introduction of the Provisional Application). The first and second functions of bits 8 and 9 in addition to the fact that DC balancing will be used to transport audio information are important in considering the proposal. The elements of the Abstract in the Application of Mair et al. (i.e., Publication No. 2002/0186322

A1) are proposed in the Introduction of the provisional. In addition, the Principle of Operation as well as in the section named "proposal" were considered by the examiner. Considering the fact that the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application) it is clear to the examiner that one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant.

FOA, at 2-3 (Emphasis Added).

Examiner's use of Mair as prior art, in view of the reasoning in the Final Office Action is erroneous because Examiner does not even allege, much less establish, that the '924 properly supports the subject matter (e.g., Mair [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]) relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. The fact that "the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application)" is simply not the proper standard for determining whether the "critical reference date of" Mair "is the filing date of the provisional application".

Additionally, whether "one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant" is not the standard for a rejection under 35 U.S.C. § 102. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Therefore, since the '924 Application does not properly support the subject matter relied upon to make the rejection, the 35 U.S.C. 102(e) critical date of Mair should not be the filing date of the '924 Application, but rather the filing date of the utility application, which is October 15, 2001. Since the present application has a priority date August 17, 2001, Mair is not prior art under 35 U.S.C. 102(e).

For the foregoing reasons, Assignee respectfully requests that the Board REVERSE the rejection to claim 13 as well as the rejection to dependent claims 14-17.

X. ARGUMENT – CLAIM 18 IS NOT ANTICIPATED BY MAIR

Claims 18 stands rejected under 35 U.S.C. § 102(b) as anticipated by Mair.

Claim 18 is reproduced below:

18. (Previously Presented) A system for transmitting auxiliary data in video encoding comprising:

a receiver adapted to receive first and second data;

an encoder adapted to encode said first data based on at least one bit of said second data;

a packaging device adapted to package said encoded first and second data into a single word; and

a communication device adapted to communicate said single word.

A. CLAIM 18 CANNOT BE REJECTED UNDER 35 U.S.C. § 102(b)

Claim 18 was "rejected under 35 U.S.C. 102(b) as being anticipated by Mair. First Office Action (1OA) at 3; Final Office Action (FOA), at 3. However, it appears that Examiner meant to reject claim 1 under section (e) of 35 U.S.C. 102

because Examiner quotes this section immediately prior, 1OA, at 3, Paragraph 4; FOA, at 3, Paragraph 2.

Appellant brought the foregoing to the attention of the Examiner in the response to the first office action of December 18, 2006. Response to Office Action, Remarks. However, the Examiner did not clarify this in the Final Office Action. In fact, Examiner again quoted section (e) of 35 U.S.C. § 102, but rejected claim 1 under section (b).

To the extent that claim 1 is rejected under 35 U.S.C. § 102(b), Appellant respectfully submits that Mair was published on December 12, 2002 (Mair, Cover), after the filing date of the present application, December 27, 2001 and after the priority date of the present application, August 17, 2001, and thus not available as prior art under 35 U.S.C. § 102(b).

B. CLAIM 18 CANNOT BE REJECTED UNDER 35 U.S.C § 102(e) BECAUSE MAIR IS NOT PRIOR ART UNDER 35 U.S.C. § 102(e)

To reject claim 18, Examiner indicated that “the limitations of this claim are met in the rejection of claims 1, [1]2, and 13 above” and that “Mair discloses the same method of transmitting auxiliary data in video encoding (See Abstract) comprising receiving first and second data (See [0042], lines 4-6), encoding the first data based on a state of at least one bit of the second data (See [0033], lines 7-19 and [0035, lines 7-16), packaging the encoded first data and the second data into a single word (See [0042]), and communicating the single word (See [0043]).” FOA at 4.

Appellant notes that the present application claims a priority date to August 17, 2001 under 35 U.S.C. § 119(e)(1). The Appellant notes that Mair was filed on October 15, 2001 and claims priority to provisional application, Serial No. 60/296,924, filed June 8, 2001 (hereinafter, "the '924 Application"). Reference is made to the following citation from the MPEP:

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions **if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.**

See the M.P.E.P. § 2136.03 (Emphasis Added). Appellant points out that the '924 Application does not disclose any of the FIGS. 1-5, which were disclosed in Mair. In essence, the '924 Application merely summarizes the use of the 8 bit/10 bit encoding process, which is a part of the disclosure in Mair. The Applicant respectfully submits that **the '924 Application does not properly "support the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph."**

For example, with respect to independent claim 1, the Examiner relies on [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]. See the Final Office Action at 4. As stated above, the '924 Application merely describes the use of the extra bits (Bit 8 and Bit 9) and it does not support any of the citations that the Examiner relies on (e.g., [0042], lines 4-6, [0033], lines 7-19,

[0035], lines 7-16, [0042], and [0043]), nor does it support any of the Figures 1-5 of Mair, corresponding to the above citations used in the Examiner's rejections.

For example, paragraph [0035] describes Figure 2, while [0042] and [0043] describe Figure 5. Neither Figures 2 or 5 are in the '924 application.

Examiner has indicated that:

The proposal submitted on the provisional application contains the elements to meet the 35 U.S.C. § 112 first criteria. The provisional application notes in the introduction that The DVI signal perform the encoding while two additional bits perform specific and distinct functions (See Introduction of the Provisional Application). The first and second functions of bits 8 and 9 in addition to the fact that DC balancing will be used to transport audio information are important in considering the proposal. The elements of the Abstract in the Application of Mair et al. (i.e., Publication No. 2002/0186322 A1) are proposed in the Introduction of the provisional. In addition, the Principle of Operation as well as in the section named "proposal" were considered by the examiner. Considering the fact that the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application) it is clear to the examiner that one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant.

FOA, at 2-3 (Emphasis Added).

Examiner's use of Mair as prior art, in view of the reasoning in the Final Office Action is erroneous because Examiner does not even allege, much less establish, that the '924 properly supports the subject matter (e.g., Mair [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]) relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. The fact

that “the elements of the abstract of Mair’s Publication (2002/0186322 A1) are found in the proposal (which is the provisional application)” is simply not the proper standard for determining whether the “critical reference date of” Mair “is the filing date of the provisional application”.

Additionally, whether “one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant” is not the standard for a rejection under 35 U.S.C. § 102. “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Therefore, since the ‘924 Application does not properly support the subject matter relied upon to make the rejection, the 35 U.S.C. 102(e) critical date of Mair should not be the filing date of the ‘924 Application, but rather the filing date of the utility application, which is October 15, 2001. Since the present application has a priority date August 17, 2001, Mair is not prior art under 35 U.S.C. 102(e).

C. EVEN IF MAIR IS AFFORDED THE FILING DATE OF THE PROVISIONAL APPLICATION, THE REJECTION SHOULD BE REVERSED BECAUSE MAIR DOES NOT DISCLOSE “ADAPTED TO ENCODE SAID FIRST DATA BASED ON A STATE OF AT LEAST ONE BIT OF SAID SECOND DATA”

Even assuming for the sake of argument that the ‘924 Application complies with 35 USC § 112, 1st ¶ (which the Applicant maintains that it does not), the Examiner’s argument regarding the rejection of claim 1 under 35 U.S.C.

§ 102(e) is still deficient. For example, the Applicant submits that Mair does not disclose or suggest at least the limitation of “encoding said first data based on a state of at least one bit of said second data,” as recited in Applicant’s claim 1.

In his Final Office Action, the Examiner relies for support on lines 7-19 of [0033] and lines 7-16 of [0035]. See the Final Office Action at page 4. The Applicant respectfully disagrees. Paragraphs [0033] and [0035] of Mair relate to prior art Figures 1 and 2, respectively. More specifically, paragraph [0033] and Figure 1 relate to the DVI 1.0 encoding algorithm, and paragraph [0035] and Figure 2 relate to various DVI encoding concepts. Paragraphs [0033] and [0035], as well as Figures 1 and 2 of Mair, do not disclose or suggest that encoding of first data based on a state of at least one bit from second data, as recited in Applicant’s claim 1.

With regard to Examiner’s “Response to Arguments” section in the Final Office Action, it seems that the Examiner is also relying on the use of bits 8 and 9 by Mair. This argument is also deficient as it does not provide any support for what is recited in Applicant’s claim 1. For example, Mair discloses that bit 8 is used to indicate a translation that the data may go through for the purpose of transition minimization. See Mair at ¶ 0019. Mair also discloses that bit 9 is used to indicate optional inversion of bits 0 through 7. See *id.* at ¶ 0020. However, neither bit 8 nor bit 9 is used by Mair for purposes of encoding any data.

Therefore, the Applicant maintains that Mair does not disclose or suggest at least the limitation of “an encoder adapted to encode said first data based on a state of at least one bit of said second data,” as recited in Applicant’s claim 18.

For the foregoing reasons, Assignee respectfully requests that the Board REVERSE the rejection to claim 18.

XI. CLAIM 19 IS NOT OBVIOUS FROM MAIR

Claim 19 was rejected under 35 U.S.C. § 103(a) as being obvious from Mair.

Claim 19 is reproduced below:

19. (Previously Presented) A system for transmitting auxiliary data in video encoding comprising:

an un-enhanced encoder;

an enhanced encoder;

an un-enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders; and

an enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders.

To reject claim 19, Examiner indicated that “As per claims 19-21, most of the limitations of these claims have been noted in the above rejection of claims 1, 12, and 13”, FOA at 5, and that “Mair discloses the same method of transmitting auxiliary data in video encoding (See Abstract) comprising receiving first and second data (See [0042], lines 4-6), encoding the first data based on a state of at least one bit of the second data (See [0033], lines 7-19 and [0035, lines 7-16), packaging the encoded first data and the second data into a single word (See [0042]), and communicating the single word (See [0043]).” FOA at 4.

Appellant notes that the present application claims a priority date to August 17, 2001 under 35 U.S.C. § 119(e)(1). The Appellant notes that Mair was filed on October 15, 2001 and claims priority to provisional application, Serial No. 60/296,924, filed June 8, 2001 (hereinafter, "the '924 Application").

Although 35 U.S.C. 103(a) does not set forth what can be used as "prior art", "[p]rior art available under 35 U.S.C. 102 is available under 35 U.S.C. 103." MPEP 2141. While the rejection is made under 35 U.S.C. 103(a), it appears as though Examiner is claiming that Mair is prior art under 35 U.S.C. 102(e).

Reference is made to the following citation from the MPEP:

The 35 U.S.C. 102(e) critical reference date of a U.S. patent or U.S. application publications and certain international application publications entitled to the benefit of the filing date of a provisional application under 35 U.S.C. 119(e) is the filing date of the provisional application with certain exceptions **if the provisional application(s) properly supports the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph.**

See the M.P.E.P. § 2136.03 (Emphasis Added). Appellant points out that the '924 Application does not disclose any of the FIGS. 1-5, which were disclosed in Mair. In essence, the '924 Application merely summarizes the use of the 8 bit/10 bit encoding process, which is a part of the disclosure in Mair. The Applicant respectfully submits that **the '924 Application does not properly "support the subject matter relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph."**

For example, with respect to independent claim 19, the Examiner relies on [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]. See the Final Office Action at pages 3-4. As stated above, the '924 Application merely describes the use of the extra bits (Bit 8 and Bit 9) and it does not support any of the citations that the Examiner relies on (e.g., [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]), nor does it support any of the Figures 1-5 of Mair, corresponding to the above citations used in the Examiner's rejections.

For example, paragraph [0035] describes Figure 2, while [0042] and [0043] describe Figure 5. Neither Figures 2 or 5 are in the '924 application.

Examiner has indicated that:

The proposal submitted on the provisional application contains the elements to meet the 35 U.S.C. § 112 first criteria. The provisional application notes in the introduction that The DVI signal perform the encoding while two additional bits perform specific and distinct functions (See Introduction of the Provisional Application). The first and second functions of bits 8 and 9 in addition to the fact that DC balancing will be used to transport audio information are important in considering the proposal. The elements of the Abstract in the Application of Mair et al. (i.e., Publication No. 2002/0186322 A1) are proposed in the Introduction of the provisional. In addition, the Principle of Operation as well as in the section named "proposal" were considered by the examiner. Considering the fact that the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application) it is clear to the examiner that one skilled in the art can and would look to the provisional application to derive the Abstract as well as to find the claimed limitations of the applicant.

FOA, at 2-3 (Emphasis Added).

Examiner's use of Mair as prior art, in view of the reasoning in the Final Office Action is erroneous because Examiner does not even allege, much less establish, that the '924 properly supports the subject matter (e.g., Mair [0042], lines 4-6, [0033], lines 7-19, [0035], lines 7-16, [0042], and [0043]) relied upon to make the rejection in compliance with 35 U.S.C. 112, first paragraph. The fact that "the elements of the abstract of Mair's Publication (2002/0186322 A1) are found in the proposal (which is the provisional application)" is simply not the proper standard for determining whether the "critical reference date of" Mair "is the filing date of the provisional application".

Therefore, since the '924 Application does not properly support the subject matter relied upon to make the rejection, the 35 U.S.C. 102(e) critical date of Mair should not be the filing date of the '924 Application, but rather the filing date of the utility application, which is October 15, 2001. Since the present application has a priority date August 17, 2001, Mair is not prior art under 35 U.S.C. 102(e).

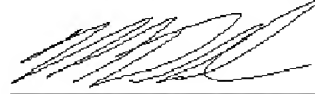
For the foregoing reasons, Appellant respectfully requests that the Board REVERSE the rejection to claim 19 and dependent claims 20 and 21.

XII. CONCLUSION

For the foregoing reasons, all of the pending claims are distinguishable over the prior art of record. Reversal of the Examiner's rejection and issuance of a patent on the application are therefore requested.

The Commissioner is hereby authorized to charge \$500 for the Appeal Brief fee and any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Account No. 13-0017.

Respectfully submitted,



Mirut P. Dalal
Registration No. 44,052
Attorney for Appellant

Dated: January 22, 2008

McANDREWS, HELD & MALLOY, LTD.
500 West Madison Street, 34th Floor
Chicago, IL 60661
Telephone: (312) 775-8000
Facsimile: (312) 775-8100

CLAIMS APPENDIX

1. A method of transmitting auxiliary data in video encoding comprising:

receiving first and second data;

encoding said first data based on a state of at least one bit of said second data; and

packaging said encoded first data and said second data into a single word; and

communicating said single word.

2. The method of claim 1, further comprising DC balancing said first data.

3. The method of Claim 1, wherein encoding said first data further comprises determining whether said first data should be inverted.

4. The method of Claim 3, wherein encoding said first data further comprises comparing a state of inversion of said first data to said state of said at least one bit of said second data.

5. The method of Claim 4, wherein encoding said first data further comprises inverting said first data if said state of inversion of said first data does not match said state of said at least one bit of said second data.

6. The method of Claim 4, wherein encoding said first data bit further comprises not inverting said first data if said state of inversion of said first data matches said state of said at least one bit of said second data.

7. The method of Claim 1, wherein encoding said first data comprises determining an intermediate value for said first data.

8. The method of Claim 7, wherein encoding said first data further comprises comparing said intermediate value to at least one bit of audio data.

9. The method of Claim 8, wherein encoding said first data further comprises encoding said first data and said audio data if said state of inversion of said first data bit is equal to said at least one bit of audio data.

10. The method of Claim 7, wherein encoding said first data further comprises inverting said first data if said state of inversion of said first data does not match said state of said at least one bit of audio data.

11. The method of Claim 10, wherein encoding said first data further comprises encoding said inverted first data and said at least one bit of audio data.

12. A method of balancing a code word in a video encoder comprising:

receiving data;

determining a particular state for said data; and

encoding said data based on the particular state for the data.

13. A method of balancing a code word in video encoder comprising:

receiving data;

determining a particular state for said data;

selecting a logic operation that will result in a state closest to said particular state; and

performing said selected logic operation on at least a portion of said data.

14. The system of Claim 13, wherein performing said logic operation comprises performing an exclusive nor operation.

15. The system of Claim 13, wherein said desired state includes data having a strong 1 presence.

16. The system of Claim 13, wherein performing said logic operation comprises performing an exclusive or operation.

17. The system of Claim 13, wherein said desired state includes data having a strong 0 presence.

18. A system for transmitting auxiliary data in video encoding comprising:

a receiver adapted to receive first and second data;

an encoder adapted to encode said first data based on at least one bit of said second data;

a packaging device adapted to package said encoded first and second data into a single word; and

a communication device adapted to communicate said single word.

19. A system for transmitting auxiliary data in video encoding comprising:

an un-enhanced encoder;

an enhanced encoder;

an un-enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders; and

an enhanced decoder adapted to communicate with said un-enhanced and enhanced encoders.

20. The system of Claim 19, wherein said enhanced decoder is adapted to communicate enhanced data word.

21. The system of Claim 19, wherein said un-enhanced encoder is adapted to communicate un-enhanced data word.

EVIDENCE APPENDIX

(None)

RELATED PROCEEDINGS APPENDIX

(None).